

REMARKS

REJECTIONS UNDER 35 U.S.C. § 112

Claims 27-29 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Applicants traverse. Imprint lithography will not work with printing ink, which does not polymerize under UV light. One skilled in the art would easily recognize that the flowable materials (polymerizable fluids) described in this application exclude the use of printing inks.

Furthermore, [0022] of the present application discloses that the material is described in serial no. 10/463,396, which is incorporated by reference. This application issued as USP 7,157,036, and the compositions described therein exclude printing ink compositions.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-3, 5-8, 11, 13-15, 27, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Colburn* (Doctor of Philosophy dissertation, University of Texas at Austin, 2001) in view of Published U.S. Patent 2002/0094496 to *Choi*, hereafter (*Choi*) and further in view of U.S. Patent 6482742 to *Chou*, hereafter (*Chou*). Applicants respectfully traverse these rejections.

The Office Action states that while *Colburn* teaches a method that is or could be used in an imprint lithography system he is silent on a plurality of imprint lithography molds having three dimensional relief patterns and causing the template to flex by urging the template to further engage the imprint lithography molds with the material in the flowable regions so each imprint lithography mold conforms to a topography of the substrate. As Applicants have asserted in a previous amendment, the template in *Colburn* would break if flexed. Therefore, *Colburn* teaches away from the present invention.

The Office Action states that *Choi* teaches a plurality of imprint molds having three dimensional relief patterns citing Fig. 4, item 40, and Fig. 6. While *Choi* shows a template with multiple patterned areas, *Choi* speaks of his template being structurally designed to have limited deformation or distortion. *Choi* does not teach or suggest the limitations of step 3 or step 4 of

Claim 1. Also by his admission of having "entrainment" channels between his patterned, *Choi* admits that his excess fluid escapes from the patterned areas. Furthermore, [0087] of *Choi* does not teach or suggest flexible templates, but instead suggests compressible protrusions.

Flexibility of protrusions is not the same as flexibility of templates.

The Office Action states that *Chou* teaches that it is desirable to have a flexible mold and substrate. *Chou* describes a single wide area mold where the entire mold is flexible so that his fluid pressure may cause the entire mold area to conform to a substrate. This may put undo restrictions on the material used to make his mold. In claim 1, the template has a plurality of molds each with three dimensional relief patterns wherein the area around each mold has features that allow localized flexing of the template so that the individual molds may come into more intimate contact with the flowable material while conforming to the substrate. There is clearly a difference between having a mold that is flexible and having a plurality of molds that are coupled with a template wherein the template area surrounding the molds is has features that allow localized flexing of the template. As noted above, *Colburn* teaches away from a flexible template, *Choi* does not suggest a flexible template contrary to the Examiner's assertions, and *Chou* does not teach or suggest all of the features of claim 1. The Applicant asserts that the combination of *Choi*, *Colburn* and *Chou*, singly or in combination, does not teach or suggest the invention of Claim 1.

Amended Claim 2 is dependent from Claim 1 and contains all the limitations of Claim 1. Since Claim 1 is not obvious over the cited prior art, Claim 2 which further limits Claim 1 is also not obvious.

Amended Claim 3 is dependent from Claim 1 and contains all the limitations of Claim 1. Therefore, the Applicant asserts that the combination of *Choi*, *Colburn* and *Chou*, singly or in combination, do not teach or suggest the invention of Claim 3.

Claims 5-8 are dependent from Claim 1 and contains all the limitations of Claim 1. Claims 5-8 further limit Claim 1. Since Claim 1 is not obvious over the cited prior art, Claims 5-8 which further limit Claim 1 are also not obvious.

Amended Claim 9 is rejected for the same reasons as Claim 1. Claim 9 has been amended with the limitations of Claim 14. Note that Claim 14 had a typo as being dependent upon Claim 10 instead of Claim 9. Applicants have corrected this typo, which amendment was not made to overcome a prior art rejection. In rejecting Claim 14, the Examiner is in error. Again, *Chou* cannot be flexed or it will break; and, *Choi* does not suggest flexing. In *Choi*, the entrainment features are not between the localized templates 401. The combination of *Choi*, *Colburn* and *Chou*, singly or in combination, does not teach or suggest the invention of Claim 9.

Amended Claim 11 is dependent from Claim 9 and contains all the limitations of Claim 9. Claim 11 adds the limitation that in step 1 the plurality of flowable regions are formed to have a one to one correspondence to said plurality of imprint lithography molds. Since Claim 9 is not obvious over the cited prior art, Claim 11 is also not obvious.

Claim 13 is rejected for the same reasons as Claim 5. Claim 13 is dependent from Claim 9 and contains all the limitations as Claim 9. Claim 13 adds the limitation that the solidifying step further includes applying electromagnetic activation energy to said plurality of flowable regions of Claim 9. The Applicant has shown that Claim 9 is not obvious over the cited prior art and therefore Claim 13 is also not obvious.

Claim 7 is in independent form. Claim 7 recites that the forming step further includes forming the plurality of flowable regions concurrently. The Office Action states that the limitation of Claim 7 is an order of steps and as such would be obvious as no unexpected result is asserted. Applicants traverse. The claims are directed to "full wafer or large area imprinting with multiple separated sub-fields for high throughput lithography" as evidenced by the Patent Application title. Concurrently forming the plurality of flowable regions contributes to the high throughput and is made possible by the structure of the elements in the steps of Claim 7. Therefore, Claim 7 recites an invention having unexpected results not suggested by the prior art.

Claim 8 is dependent from Claim 1 and contains all the limitations as Claim 1. Claim 8 adds the limitation that the forming step further includes forming each of the plurality of flowable regions to be spaced apart from adjacent flowable regions of the plurality of flowable

regions. The Applicant has shown that Claim 1 is not obvious over the cited prior art therefore Claim 8 is also not obvious.

Limitations of Claim 20 have been inserted into Claim 16. The Office Action states that *Colburn* is silent on the contacting further including flexing the template at a region between adjacent molds of the plurality of imprint lithography molds. In fact, *Colburn* is completely silent as to flexing of its template. In fact, *Colburn* teaches away from a flexible template since the template in *Colburn* would break. Applicants incorporate the arguments made above with respect to Claim 9. *Choi* [0087] states that protrusions may be compressible. Compressibility of protrusions is not the same as flexibility of templates or molds. Thus, the Examiner's assertion as to how *Choi* suggests the combination is in error. And, *Colburn* does not teach or suggest the flexing of a template between molds. The Applicant asserts that *Colburn*, *Choi* and *Chou*, singly or in combination, do not teach the limitations of Claim 16.

Claim 17 is dependent from Claim 16 and contains all the limitations as Claim 16. Claim 17 adds the limitation that the forming step further includes forming the plurality of flowable regions to have a one to one correspondence to the plurality of imprint lithography molds. The Applicant has shown that the cited prior art does not teach or suggest Claim 16 and thus does not teach Claim 17 which further limits Claim 16.

Claim 19 is dependent from Claim 16 and contains all the limitations as Claim 16. Claim 19 adds the limitation that the solidifying step further includes applying electromagnetic activation energy to the plurality of flowable regions.. The Applicant has shown that the cited prior art does not teach or suggest Claim 16 and thus does not teach Claim 19 which further limits Claim 16.

The Office Action does not specifically address Claims 24-26 and thus fails to make a *prima facie* case of obviousness of these claims over the cited prior art.

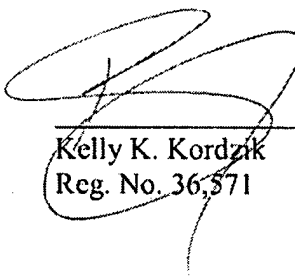
CONCLUSION

As a result of the foregoing, it is asserted by Applicants that the claims in the Application are now in condition for allowance, and allowance of such claims is respectfully requested. Applicants believe that no further fees are due. However, should any fees be required, the Commissioner is authorized to charge such fees to Deposit Account No. 06-1050. Please reference Attorney Docket No. 21554-070001 (formerly P107-49-03).

If the examiner has any questions or comments concerning this paper or the present Application in general, the examiner is invited to call the undersigned.

Respectfully submitted,

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